

Running head: HYPERSEXUAL OR PSYCHOPATHOLOGY?

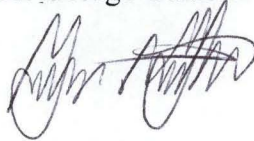
Hypersexual of Psychopathology?  
An Examination of What it Means to be Bisexual

An Honors Thesis (PSYSC499)

By

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A handwritten signature in black ink, appearing to read 'George Gaither', with a stylized, cursive script.

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## Abstract

This paper examines the relationship between heterosexuals and bisexuals and their scores on hypersexual and psychopathology measures. Limited research has been done examining bisexuality, and the research that has been done is confounded by grouping bisexuals and homosexuals together, and inconsistencies in defining bisexuality (MacDonald, 1983). The present study examines sexual orientation by sexual behaviors, attractions, identity, fantasies, and an omnibus item. The study consisted of 863 college students. Half of the measures assessed hypersexuality and the other half-assessed psychopathologies. A series of multivariate analysis of covariance (MANCOVA) assessed the relationship between sexual orientation, hypersexuality, and psychopathologies. The present study found no differences between male heterosexuals and male bisexuals across any of the measures; however, differences were found between female heterosexuals and female bisexuals.

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## Hypersexual or Psychopathology?

### An Examination of What it Means to be Bisexual

Bisexuality is a word commonly used by individuals; however, bisexuality has mixed meanings. For example, when one types bisexuality into a search engine, such as Google Scholar, one of the first links individuals receive is a link to an article titled, *Bisexual health: An introduction and model for HIV/STI prevention programming*. This article provides information on bisexuality; however, when typing in one of the websites referenced in an Internet browser, the website fails to appear (Miller, André, Ebin, & Benssonova, 2007). This causes confusion among individuals when looking at bisexuality, as the information may not be reliable; however, individuals may take the information as being accurate. For example, Miller et. al (2007) provide hypothetical findings that people who identify as bisexuals will be more likely to report depression and are at a higher risk of developing an STI (Sexually Transmitted Infection). These are hypothetical findings; therefore, individuals should not treat them as being accurate.

Few studies have researched bisexuality, and those studies that have examined bisexuality have shown flaws in their research (MacDonald, 1983). Problems arise as much of the research conducted on bisexuality has grouped homosexuals and bisexuals together (Herek, 2002; MacDonald, 1983); although, the few research studies that have separated bisexuals and homosexuals have revealed bisexuals and homosexuals should not be placed into the same category and differ significantly (Macdonald, 1983). More problems arise with the study of bisexuality as there are multiple definitions within the research at assessing sexual orientation (Kinsey, 1948; Ulrichs, 1994). Past literature has also not been consistent in defining bisexuality, and often the researcher's definitions of sexual orientations are not included in their reports (De Cecco & Shively, 1985; Sell & Petrulio, 1995).



MacDonald (1983) brought attention to past problems with studying bisexuality and homosexuality; although a large number of people are bisexual (MacDonald, 1983), there is little research on bisexuality (MacDonald, 1983; Phillips & Fischer, 1998). Powel et al. (1996, as cited in Phillips, Ingram, Smith, & Mindes, 2003) reported that only four articles in a sample of 353 abstracts published in Psychlit between 1985 and 1995, addressed bisexuality. Chung and Katayama (1996) report that bisexual individuals are underrepresented in studies published in the *Journal of Homosexuality* between 1974 and 1993. In 1973, the American Psychiatric Association declassified homosexuality as a mental disorder in the Diagnostic and Statistical Manual of Mental Disorders (Fox, 1996); however, the American Psychiatric Association never classified or declassified bisexuality as a mental disorder, leaving bisexuality out of the polarized category of being homosexual or heterosexual. Past research has labeled bisexuality under homosexuality (Fox, 1996).

The literature does suggest that bisexuals do have differences from homosexuals and heterosexuals. Some research has shown that individuals, who are bisexual, may be confused about their sexual orientation (Diamond, 2003), experience more psychopathologies (Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002), or be hypersexual (Miller et al., 2007). Kenyon (1968) compared bisexual, homosexual, and heterosexual individuals finding differences among the groups, such as bisexuals beginning menstruation earlier than lesbians and heterosexuals and bisexuals being more religious than lesbians are; however, it is important to note that Kenyon only used women in his sample. Miller et al. (2007), in a review of articles, showed that bisexuals differed from heterosexual and homosexuals on drug usage, alcohol usage, sexual health, tobacco usage, cancer rates, nutritional health, heart health, depression and anxiety, social support, and self-harm. However, Miller et al. (2007) did find conflicting research.



Researchers looking at human sexuality (Kinsey, 1953; Ulrichs, 1994) have suggested multiple sexual orientation definitions. Ulrichs (1994) classified sexual orientation in three ways, in a series of pamphlets in the 1860s; he classified males as Dionings, Urnings, and Uranodionings, with individuals clearly fitting into one of these categories. Cory (1951) stated that Ulrichs' classifications are the equivalent of heterosexual, homosexual, and bisexual. Kinsey (1953) thought human sexuality should be measured on a continuum and developed a scale which reflected this "*(0 = Exclusively heterosexual with no homosexual, 1 = predominantly heterosexual, only incidentally homosexual, 2 = predominantly heterosexual, but more than incidentally homosexual, 3 = equally heterosexual and homosexual, 4 = predominantly homosexual, but more than incidentally heterosexual, 5 = predominantly homosexual, but incidentally heterosexual, 6 = exclusively homosexual)*" (Kinsey, 1953, p. 638). It is important to point out that Kinsey's scale is limited, in that, he only designed it to assess human sexual behaviors, and not other aspects of human sexuality. Other researchers have included affective dimensions to their definitions of sexual orientation, in addition to the behavioral aspects of sexual orientation (Weinrich, 1988). Sell (1997) states there are two components in the definition of sexual orientation feelings and behaviors. Miller et al. (2007) base their definition of bisexuality on sexual and romantic attraction. In Rust's (2001) study of bisexuals, bisexuals defined their bisexuality as only needing the attraction and not the behavior to consider themselves bisexuals. Lastly, Rieger, Chivers, and Bailey (2005) only take arousal as equating sexual orientation.

Blumstein and Schwartz give one reason for the disagreement of trying to define sexual orientations (1976); they state that many homosexual and heterosexual individuals believe that any same-sexual behavior makes an individual homosexual. For example, Masters and Johnson

(1979) selected 20 male and 20 female individuals who scored three on the Kinsey scale to represent the homosexual population.

Bisexuals have often been thought of as hypersexual and always seeking a new sexual partner (Miller et al., 2007). Constantly seeking a sexual partner, nonmonogamy, and sexual promiscuity defines hypersexuality. Herek (2002) states that bisexuals are often targets of greater hostility because they are viewed as sexually promiscuous and nonmonogamous.

Reinhardt (2002) states that bisexual women often seek more than one sexual partner because their partners cannot come to terms with their need for nonmonogamy. Reinhardt states that bisexual individuals' relationships are less stable than heterosexual or homosexual individuals' relationships. Reinhardt's sample was limited to only 26 bisexual women.

Kelly, Bimbi, Nanin, Izienicki, and Parsons (2009) examined bisexual and homosexual relationships on sexual compulsivity. However, male bisexuals and homosexuals were grouped together and compared against women bisexuals and homosexuals. Sexual compulsivity was measured using the Sexual Compulsivity Scaled (SCS) developed by Kalichman and Rompa in 1995. They found that gay and bisexual men had higher SCS scores than lesbian and bisexual women; men were also more likely to use drugs and alcohol before sex than women were.

While some individuals feel bisexuals are hypersexual, other individuals feel that bisexuals are confused about their sexual orientation or suffer more psychopathologies. Many research articles on bisexuality state bisexuals are truly confused and/or bisexuality is not a true category (Phillips et al. 2003; Diamond, 2003, Muscarella, 1999; Bergler, 1956). Phillips et al. (2003) point out the essentialist perspective in regards to sexual orientation; this perspective states that individuals are either homosexual or heterosexual. Those individuals who say they are bisexual are in a transitional period, and they will eventually become heterosexual or



homosexual (Phillips et al., 2003). Diamond (2003) also addresses this issue of bisexuality not always being permanent. Diamond (2003) states that when an individual comes out as bisexual this is believed to be a permanent identification; however, there are numerous instances where one later rejects this identification. Diamond elaborates stating rejection of being bisexuals for these individuals are not a result of societal stigmatization, because many of these individuals embraced their bisexuality. Diamond states one possible reason these individuals later depart their bisexual identification is because they never truly were bisexual, that these individuals were simply confused about their sexual orientation or curious (Diamond, 2003). In Diamond's (2003) study, which consisted of mostly, well-educated women, showed that over one fourth of bisexuals and lesbians relinquished their identification as a bisexual or lesbian over a five-year period, half of which returned to a heterosexual identification. Muscarella (1999) states there are many situational factors that influence bisexuality as being a situational or temporary activity such as individuals being bored, having the opportunity, mistakes, and curiosity (as cited in Diamond, 2003).

Miller et al. (2007) state that bisexuals often have to deal with the idea of bisexuality being nonexistent, being unable to commit to a relationship, and their sexual orientation being a phase. Pachankis and Goldfried (2004) state that bisexuals have difficulty accepting their sexual orientation because many heterosexual and homosexual individuals believe bisexuals are really moving towards being homosexual, believing bisexuality is only a phase. Bergler (1956) does not feel there are bisexuals. Bergler believes that bisexuals are truly homosexual; however, they have an occasional heterosexual encounter, believing bisexuality was a fraud (1956). Rieger, et al. (2005) states that bisexuality is nonexistent. Rieger et al. (2005) conducted an experiment in which they measure arousal of men who were exposed to pornography. The participants'



penises were attached to penis-meters (plethysmograph) to measure males' arousal levels while watching two men have sex with one another and two women having sex with one another. In the study, watching the women have sex with one another did not arouse bisexuals; however, bisexuals did become aroused while watching the two men have sex. Therefore, Rieger et al. (2005) concluded that bisexual men are nonexistent and truly homosexuals. This view has heterosexuality and homosexuality of being polar opposites, neglecting bisexuality (Miller et al., 2007).

Bisexuals may also experience anxiety, stress, and depression about their sexual orientation; Jorm et al. (2002) showed that bisexuals were higher on measures of anxiety, depression and negative affects when compared to homosexuals and heterosexuals. Jorm et al. (2002) concluded that bisexuals had the worst mental health when compared to heterosexuals and homosexuals. Heterosexuals view bisexuals more negatively than any other group except drug users (Herek, 2002), illustrating they are less accepting of bisexuals.

The literature on bisexuality has multiple ways at measuring bisexuality (Kinsey, 1953; Ulrichs, 1994). The limited literature on bisexuality suggests bisexuals are confused (Diamond, 2003) and experiencing more psychopathologies (Jorm et al., 2002) about their sexual orientation (Diamond, 2003) or hypersexual (Miller et al., 2007). Because, there is no clear definition of bisexuality, "myths" such as bisexuals experiencing more psychopathologies or being hypersexual cannot be verified or refuted. The present study will defined bisexuality in five different ways, by looking at self-identification, attractions, fantasies, behaviors, and looking at all of these together (omnibus) in an attempt to assess the degree to which bisexuals experience psychopathologies and the degree to which they are hypersexual. The present study will illustrate a better view of what it means to be bisexual.

## Methods

### Participants

Participants were 863 introductory psychology students, 69.4% female and 30.6% male, mostly aged 18 to 19 years. Participants were predominately Caucasian, 91.8%, Christian, 55.0%, and self-identified heterosexual 96.2%. The race of the individuals was diverse, with 4.6% African American, 1.7% Hispanic, 0.5% Asian, 0.1% American Indian, and 1.3% other. The remainder of religious affiliation was distributed among Catholic 23.5%, Agnostic, Atheist, or no Religion 14.7%, and Other 2.5%, 4.2% of the data was missing. Fifty-one point nine percent of males and 58.4 percent of females were currently in a sexual relationship, with a mean length being 15.78 months. A university website obtained participants; students taking introductory psychology are required to complete four hours of research credit or an alternative assignment as part of the course. For participating in the study, students received one hour of research credit. Students were excluded from participating if they were: (a) currently receiving or planning to receive psychological counseling for sexual abuse or sexual disorders, (b) individuals who had pending court hearings for sexual abusive behavior, or (c) were less than 18 years of age.

### Measures

*Demographics.* Participants provided information on 12-items regarding demographic information, in multiple-choice and open answer format. The demographic questionnaire included information on age ( $M=19.07$ ), ethnicity group, gender, religious affiliation, monthly frequency of attendance at religious services ( $M=1.73$ ), number of semesters of college completed ( $M=1.88$ ), and marital status (100% of participants were single).

*Sexual Orientation.* Sexual orientation was assessed by asking participants about their sexual behavior experiences, sexual fantasies, attractions to men and attraction to women, self-identified sexual orientation, and using the preceding items as one group. Sexual behavior experiences were assessed by asking the extent to which the participant has engaged in opposite sex or same sex contacts (kissing fondling, oral sex and/or intercourse). The scale ranged from no sexual experiences (0), to only opposite-sex contacts (1), some same and opposite sex, contacts (3), to only same-sex contacts have occurred (6). Sexual fantasies and thoughts were assessed by asking participants to rate the degree they have engaged in opposite sex and same sexual fantasies. The scale ranged from only opposite-sex (1) to only same-sex (6) fantasies or thoughts have occurred.

Sexual attraction to men and women were assessed on separate 7-point Likert scales, ranging from 0 (*Not at all*) to 6 (*Extremely*). Heterosexuals scored a 0 on same sexual attraction and scored a score of 1 to 7 on opposite sexual attraction. Bisexuals scored a score of 1 to 7 on both opposite sexual and same sexual attractions. Homosexuals scored a 0 on opposite sexual attraction and a score of 1 to 7 on same sexual attractions. Finally, participants self-identified their sexual orientation by selecting one of our choices, “straight (heterosexual)”, “bisexual”, “Gay/Lesbian (homosexual)”, or “asexual”.

*History of sexual aggression.* The Aggressive Sexual Behavior Inventory-Revised (ASBI-R; Zurbriggen, 2000) is a 22-item, Likert-type measure, which asks participants to indicate the extent to which they have engaged in sexually aggressive behavior. The scale contains two subscales: a 10-item Coerce scale, and a 7-item Seduce scale. All items were on a 7-point scale (1=*never*, 3=*occasionally*, 5=*fairly often*, 7=*extremely often*). Responses for the Coerce scale range from 1 to 70, and Seduce scale 1 to 49. The Coerce scale measures “forceful,



coercive, and manipulative actions.” including items such as “I have gotten a little drunk and forced the person that I’m with to have sex with me.” (Zurbriggen, 2000, p.565). The Seduce scale measure seductive behaviors, performed in a loving or manipulative way, including such items as “I have flirted with other people in order to get my partner to have sex with me.” (Zurbriggen, 2000, p.565). Zurbriggen reported acceptable internal consistency for both the Coerce (Cronbach’s  $\alpha$ ’s = .85 for men, .79 for women) and Seduce (Cronbach’s  $\alpha$ ’s = .77 for men, .78 for women) scales. Gaither, Lee, and Forbey (2008) demonstrated acceptable internal consistency for the ASBI-R for both the Coerce (Cronbach’s  $\alpha$ ’s = .92 for men, .82 for women) and Seduce (Cronbach’s  $\alpha$ ’s = .82 for men, .68 for women) scales, in a sample of men and women aged 18 to 21.

*Sexual Compulsivity.* The Compulsive Sexual Behavior Inventory (CSBI; Coleman, Miner, Ohlerking, & Raymond, 2001) is a 28-item measure, divided into three subscales: Control (13-item measure), Abuse (8-item measure) and Violence (7-item measure). A 5-point scale was used, ranging from 1 (*Very Frequently*) to 5 (*Never*); item totals for each measure ranged from 1 to 65 (Control), 1 to 40 (Abuse), and 1 to 35 (Violence). The Control scale measures the ability to which one is able to “control sexual impulses” (p. 330) (e.g., “Have you felt unable to control your sexual behavior?” (p.329)). The abuse scale measures “both being a victim and a perpetrator of abuse” (p. 331) (e.g., “Were you sexually abused as a child?” (p.329)). The Violence subscale measures “sexual interest and involvement in physically violent and/or painful behaviors” (p. 331) (e.g., “Have you ever given others pain for sexual pleasure?” (p.329)). Acceptable internal consistency was found for each scale, Control (Cronbach’s  $\alpha$  = .96), Abuse (Cronbach’s  $\alpha$  = .91), and Violence (Cronbach’s  $\alpha$  = .88).

Coleman et al. (2001) demonstrated that individuals who were nonparaphilic, pedophilic, and a normal control group differed on each sexual compulsivity subscale Control, Abuse, and Violence, illustrating discriminate validity. Lee, Ritchey, Forbey and Gaither (2009) found acceptable internal consistence for each of the subscales, Control (Cronbach's  $\alpha = .90$ ), Abuse (Cronbach's  $\alpha = .91$ ), and Violence (Cronbach's  $\alpha = .91$ ) in a sample of male college students.

The Sexual Compulsivity Scale (SCS; Kalichman & Rompa, 1995) is a 10-item measure, assessing the degree to which one is sexually compulsive. Participants rate statements (e.g.: "My sexual thoughts and behaviors are causing problems in my life.") on a 4-point Likert type scale, with responses ranging from 1 (*Not at all like me*) to 4 (*Very much like me*); totals ranged from 10 to 40. Internal consistence for the sexual compulsivity scales was acceptable (Cronbach's  $\alpha = .86$ ). Lee et al. (2009) found acceptable internal consistency in a male college sample (Cronbach's  $\alpha = .90$ ) and established construct validity for the SCS, which highly correlated ( $r = .64$ ) with the CSBI Control subscale.

*Sexual Tendencies.* The Sexuality Scale (SS; Wiederman & Allgeier, 1993) contains 30-items asking participants to rate the degree to which they agree (+2) or disagree (-2), using a 5-point Likert type scale, items ranging from 60+ to 60-, consisting of three subscales. A Self-Esteem scale measuring the degree to which one is happy and satisfied with their sexuality (e.g., "I think of myself as a very good sexual partner" (p.100)). A Sexual Depression scale measuring the degree to which one feels distraught over their ability to relate to others sexually (e.g., "I feel sad when I think about my sexual experiences" (p.100)). A Sexual Preoccupation scale assessing the degree to which one is obsessed with sexual thoughts and behaviors (e.g., "I think about sex all the time" (p.100)). Acceptable reliability was found for both men and women on each scale, Sexual Esteem (Cronbach's  $\alpha = .92, .94$ ), Sexual Depression (Cronbach's  $\alpha = .89, .89$ ), and



Sexual Preoccupation (Cronbach's  $\alpha$ 's = .96, .92). Snell, Fisher, and Schuh (1992) suggest that SS subscale scores are related to other measures, assessing sexual experiences. Lee et al. (2009) found acceptable internal consistency of each subscale (Cronbach's ranged from .87 to .90)

*Sexual Fantasies.* The Wilson Sexual Fantasy Questionnaire (WSFQ; Wilson, 1981) is a 40-item measure, examining sexual desires, preferences, and activities. Participants rate the frequency to which they have fantasized over certain situation, using a 6-point Likert-type scale, response options range from 0 (*Never*), 1 (*Seldom*), 2 (*Occasionally*), 3 (*Sometimes*), 4 (*Often*), and 5 (*Regularly*). The scale measures four types of sexual fantasies, which are: Exploratory (e.g., group sex, homosexuality), Intimate (e.g., kissing oral sex), Impersonal (e.g., watching others), and Sadomasochistic (e.g., whipping or being spanked). Each subscale has only 10 items, meaning scores range from 0 to 40. Wilson (1981) established validity for each scale through factor analysis, which identified four fantasy subscales. Lee et al. (2009) found acceptable internal consistency total score and all subscales (Cronbach's  $\alpha$ 's ranged from .81 to .94) in a male college student sample.

*Social Desirability.* The Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1988) consists of 40-items requiring participants to indicate how true or untrue an item is for him or herself using a 7-point Likert-type scale, items ranged from 1 (*Not True*), 4(*Somewhat True*), to 7 (*Very True*). Twenty items were reversed scored. Total scores were computed by taking the extremes scoring a 7 or 6 and 1 or 2 and converting them into a score of 0 or 1 respectively, making the total score for each subscale range from 0 to 20. The BIDR is designed to measure two types of social desirability, Self-Deception, "the tendency to give self-reports that are honest but positively biased (p.37)" (e.g., "I never regret my decisions.") and Impression Management, "deliberate self-presentation to an audience (p.37)" (e.g., "I never cover up my mistakes.").



Acceptable internal consistency was determined, social desirability (Cronbach's  $\alpha$ 's = .68-.80), Impression management (Cronbach's  $\alpha$ 's = .75-.86), and Social Deception (Cronbach's  $\alpha$  = .83). Paulhus (1988) established validity for self-deception by showing it highly correlating to measures of defensiveness and coping, and validity for the impression management subscale was demonstrated with a high relationship on measures of traditional lie and role-playing scales. Lee et al. (2009) found acceptable internal consistency (Cronbach's  $\alpha$ 's ranged from .60 to .75).

*Sexual History.* The Sexual History Questionnaire (SHQ; Gaither & Sellbom, 2003) consists of 23-questions used as individual variables. The questionnaire format allowed participants to describe their sexual behaviors that have occurred in the past 3 months in a structured format. The items on the scale assess masturbation frequency, the age of first sexual experience and, the number of partners with whom one engaged in oral, vaginal and anal intercourse, as well as the frequency.

*Depression, Anxiety, Stress.* The Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995) scale is a 42-item measure, with three-subscale measure (14 items for each subscale) Depression (e.g., "I felt I was pretty worthless." Anxiety (e.g., I felt terrified.") and Stress (e.g., "I found it difficult to relax."). Participants responded to the measure using a 4-point Likert-type response. The responses ranged from 1 (*Do not apply to me at all*) to 4 (*Applied to me very much, or most of the time*); items for each subscale ranged 14 to 56. Acceptable reliability was found for each scale, Depression (Cronbach's  $\alpha$  = .91), Anxiety (Cronbach's  $\alpha$  = .81), Stress (Cronbach's  $\alpha$  = .89). Acceptable discriminate validity for the three subscales Depression-Anxiety ( $r=.42$ ), Anxiety-Stress ( $r=.46$ ), and Depression-Stress ( $r=.39$ ).

*Risky Behaviors Assessment.* The Sexual and Academic Behavior Questionnaire (SBAQ) scale is a 65-item measure that asks participants whether they have engaged in risky behaviors, such as engaging in sexual assault, physical assault, stalking, and using emergency

contraceptives. (See table 1 below for a list of measures and percentage of responses). The SABQ was created from the National College Health Assessment (NCHA) items that asked about risky behavior. However, some questions from the NCHA were changed from “Within the last 12 months, have you experienced any of the following as a consequence of your drinking?” to “Within the last 12 months, have you experienced any of the following?” Items were also created for this questionnaire as well. Items 1 to 10 came from the “Health, Health Education and Safety” subsection of the NCHA. Items 11 to 14 came from the “Sexual Behavior and Contraception” section of the NCHA. Items 15 to 17 and 22 to 27 came from the “Alcohol, Tobacco, and Drugs” section of the NCHA. Items 18 to 21 were created for the SBAQ. Items 29 to 51 and 54 to 59 and 61 to 65 are from the “Impediments of Academic Performance” section of NCHA. Items 28, 52, 53, and 60 were created for the SBAQ. (See Appendix for measure).

### Procedures

This study was determined exempt by IRB, because data were stored anonymously. Students could access the survey from anywhere that they had access to the Internet. In both conditions, participants were directed to read a short description of the study on the information and credit page, including their rights as a research participant; next, participants were directed to click a hyperlink, indicating their agreement to participate.

Students were required to enter their university username and password to enter the information and credit page. That information is stored to ensure that students do not participate more than one time per condition and to provide credit for participation. It is not associated in the system with survey responses, as the respondents are labeled anonymous. No identifying information, including the date or time that the surveys were completed was stored.

Exclusionary criteria were provided in the information and consent page. Participants provided consent to participate by answering the following question, “Do you meet the Study Eligibility Criteria listed above and on the study registration page (e.g., at least 18 years old...)?”

After completing the information and credit page, students completed the surveys in one of ten different orders. The link the students picked was based on the last digit of their phone number. In each of the different versions of the survey, the demographics was the first measure participants were to complete, while the SABQ survey items were the last. All other measures were placed in different orders, in each of the 10 versions, to help control for response sets or order effects.



## Results

### *Differences among demographic and dependent variables by semester*

Because I collected data across two different semesters (Spring 2009 and Fall 2009), I examined differences on categorical demographic variables by semester using a series of Chi-square analyses. There was no significant difference by semester in relative proportions to race, religious affiliation, self-identity of sexual orientation, or ever having anal intercourse. Results reveal that participants in the spring were more likely to report ever having vaginal intercourse [74.5% vs. 61.7%;  $\chi^2(1, N = 857) = 16.03, p < .001$ ], ever receiving oral sex [80.9% vs. 71.0%;  $\chi^2(1, N = 857) = 11.51, p < .01$ ], and ever giving oral sex [75.9% vs. 66.6%;  $\chi^2(1, N = 859) = 8.93, p < .01$ ].

Next, I conducted a multivariate analysis of variance (MANOVA) to determine whether participants differed on continuous demographic variables (age, monthly frequency of church attendance, and the number of semesters of college completed) by semester. Results revealed that there was a significant multivariate effect,  $F(3,844) = 39.31, p < .001$ . Follow up univariate tests revealed that students in the spring semester were significantly older [ $M=19.45, SD=1.89$  vs.  $M=18.73, SD=1.17$ ;  $F(1,847) = 45.24, p < .001$ ] and had completed more semesters of college [ $M=2.07, SD=1.76$  vs.  $M=0.81, SD=1.65$ ;  $F(1,847) = 114.88, p < .001$ ] than students who participated in the fall semester. The two groups did not differ significantly, however, on frequency of religious service attendance, [ $M=1.59, SD=2.11$  vs.  $M=1.87, SD=2.22$ ;  $F(1,847)=3.66, p > .05$ ].

Finally, I conducted a MANOVA to determine whether participants differed on the 16 measures (ASBI Coerce, ASBI Seduce, BIDR SD, BIDR IM, CSBI total, DASS Depression, DASS Anxiety, DASS Stress, SCS Total, SS Sexual Esteem, SS Sexual Depression, SS

Preoccupation, WSFQ Exploratory, WSFQ Intimate, WSFQ Intimate, WSFQ Sadomasochistic) by semester. Results reveal no significant multivariate effect  $F(16,518) = 1.30, p > .01$ .

***Differences among demographic and dependent variables by sample***

Because there were twice as many women as men who participated, I used the SPSS 17.0 random select function to random divide the sample of women into two equal subsamples. Therefore, I examined differences on categorical demographic variables by sample using a series of chi-square analyses to determine whether the two samples of women and one sample of men differed demographically. Results reveal that the groups did not differ significantly by race, self-identity of sexual orientation, ever having vaginal intercourse, ever having anal intercourse, ever-receiving oral sex, and ever-giving oral sex. The groups did differ significantly, however, in relative proportions to religious affiliation, revealing men were more religiously affiliated than either group of women [54.5% vs. 18.2% vs. 27.3%;  $\chi^2(6, N = 827) = 29.83, p < .001$ ].

I conducted a MANOVA to determine the effect of sample on continuous demographic variables (semester on age, monthly frequency of church attendance, and the number of semesters participants had completed of college). On continuous demographic variables there was a significant multivariate effect for sample,  $F(6,1688) = 8.41, p < .001$ . Follow up univariate test for sample were statistically significant for Age,  $F(2,847) = 9.20, p < .001$ , monthly frequency of church attendance,  $F(2,847) = 7.67, p < .01$ , the number of semesters participants had completed,  $F(2, 847) = 18.12, p < .001$ . Follow up Tukey's tests reveal that men were significantly older than women, who did not differ from each other ( $M=19.42, SD=1.60$  vs.  $M=18.89, SD=1.03$  vs.  $M=18.94, SD = 1.96$  respectively), that men were significantly attending less religious services monthly than only women group one ( $M=1.31, SD=1.91$  vs.  $M=2.10, SD=2.312$  vs.  $M=1.84, SD=2.19$ . respectively), and men ( $M=1.40, SD=1.81$ ) had significantly

completed more semesters of college than women, who did not differ from each other, ( $M=1.40$ ,  $SD=1.81$  vs.  $M=1.19$ ,  $SD=1.46$  vs.  $M=1.13$ ,  $SD=1.48$  respectively).

I conducted a MANOVA to determine the effect of sample and semester on the 16 measures. Results reveal a significant multivariate effect  $F(32,1036) = 6.2$ ,  $p < .001$  (See Table 1 for summary of groups with  $M$ ,  $SD$ , and  $F$ -value of groups). Examination of table 1 shows men scored significantly lower than group two of women on BIDR Impression Management subscale. Men scored significantly higher on the SCS total score and WSFQ Exploratory subscale and significantly lower on the SS Sexual Preoccupation subscale than both groups of women, who did not differ significantly from one another.



Table 1

*Summary of descriptive statistics and differences on continuous variables by sample (N = 535).*

Measure	Men (n = 161)	Women 1 (n = 186)	Women 2 (n = 188)	F Value
ASBI Coerce	11.04 (4.30)	11.22 (4.36)	11.14 (5.18)	0.11
ASBI Seduce	11.55 (6.70)	11.74 (6.05)	11.91 (6.15)	0.22
BIDR-SD	5.63 (3.15)	5.08 (2.79)	5.18 (3.15)	1.8
BIDR-IM	4.40 <sup>a</sup> (3.17)	5.34 (3.17)	5.85 <sup>a</sup> (3.16)	9.06*
CSBI Total Score	40.44 (9.95)	39.16 (10.66)	38.38 (10.60)	1.6
DASS Depression	5.71 (8.03)	5.04 (7.08)	5.83 (7.65)	0.8
DASS Anxiety	4.11 (5.51)	4.53 (5.71)	4.40 (5.70)	0.39
DASS Stress	7.32 (7.71)	9.46 (8.14)	8.42 (8.12)	3.65
SCS Total	14.44 (5.04) <sup>a,b</sup>	12.49 (4.01) <sup>a</sup>	12.03(3.58) <sup>b</sup>	15.08*
SS Sexual Esteem	0.62 (0.76)	0.50 (0.77)	0.58 (0.75)	1.05
SS Sexual Depression	-0.80 (0.79)	-0.83 (0.69)	-0.87 (0.70)	0.36
SS Sexual Preoccupation	0.12 (0.80) <sup>a,b</sup>	-0.33 (0.68) <sup>a</sup>	-0.43 (0.84) <sup>b</sup>	21.40*
WSFQ Exploratory	9.30 (7.16) <sup>a,b</sup>	5.47 (6.22) <sup>a</sup>	5.20 (5.87) <sup>b</sup>	21.48*
WSFQ Intimate	25.37 (10.44)	22.42 (11.76)	22.00 (11.65)	4.3
WSFQ Impersonal	8.22 (6.54) <sup>a,b</sup>	4.63 (5.19) <sup>a</sup>	4.36 (5.51) <sup>b</sup>	23.45*
WSFQ Sadoomasochistic	3.35 (5.44)	4.13 (6.62)	4.60 (6.80)	1.82

Note: ASBI-R = Aggressive Sexual Behavior Inventory – Revised (Zurbriggen, 2000); BIDR = Balanced Inventory of Desirable Responding (Paulhus, 1988); CSBI = Compulsive Sexual Behavior Inventory (Coleman, Miner, Ohlerking, & Raymond, 2001); DASS = Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) SCS = Sexual Compulsivity Scale (Kalichman & Rompa, 1995); SS = Sexuality Scale (Wiederman & Alleier, 1993); WSFQ = Wilson Sexual Fantasy Questionnaire (Wilson, 1981) Numbers with the same superscript differ significantly using Tukey's HSD test and \*p < .01.

## Interactions

Follow up chi-square were conducted since I found differences by sample and semester; I split the file by semester for having ever had vaginal intercourse, ever giving oral sex, and ever

receiving oral sex. Spring semester participants did not differ in relative proportions among the samples on ever having had vaginal intercourse  $\chi^2(2, N = 411) = 1.46, p > .01$ , ever received oral sex  $\chi^2(2, N = 409) = 3.47, p > .01$ , and ever giving oral sex  $\chi^2(2, N = 410) = 1.94, p > .05$ . Fall semester participants did not differ in relative proportions among the samples on ever having had vaginal intercourse  $\chi^2(2, N = 446) = 2.17, p > .01$ , ever received oral sex  $\chi^2(2, N = 488) = 1.58, p > .01$ , and ever giving oral sex  $\chi^2(2, N = 449) = 1.56, p > .01$ .

I conducted follow up chi-square for sample on religious affiliation; I split the file by sample for religious affiliation. Men did not differ in relative proportions between semesters on religious affiliation,  $\chi^2(3, N = 247) = 3.91, p > .01$ . Women in group one did not differ in relative proportions between semesters on religious affiliation,  $\chi^2(3, N = 292) = 1.90, p > .01$ . Women in group two did not differ in relative proportions between semesters on religious affiliation,  $\chi^2(3, N = 288) = 4.54, p > .01$ .

Because the fixed factor sample was significant on the 16 dependent measures, a split file of sample examined if there were sample differences between semesters. On the 16 measures there was no significant effect within sample between the two semesters for men,  $F(16,144) = 0.53, p > .01$ , group one of women  $F(16,169) = 1.90, p > .01$ , and group two of women,  $F(16,171) = 0.96, p > .01$ . There was no significant interaction effect between sample and semester on continuous demographic variables,  $F(6, 1682) = .645, p > .01$ .

Based on the fact there are few differences between the Spring and Fall participants, only differing on age and the number of semesters completed, I can combine Spring and Fall data together. Because there were sample differences and those differences tended to be between men and the two samples of women who did not differ from each other, I will run analysis on sexual orientation separately for men, the two groups of women.

**Classification of sexual orientation**

All analysis were examined with sexual orientation viewed in five different ways, by sexual behaviors, sexual fantasies, sexual attractions, self-identity, and an omnibus item. The five measures of sexual orientation were always independent variables, and each way of defining sexual orientation was assessed on all analysis. Based on demographic measures, I categorized heterosexuals and homosexuals in by the following procedures. Individuals on the sexual behavior and sexual fantasies scale were classified as heterosexual if only opposite sexual behaviors or sexual fantasies had occurred, bisexual if any same sexual and opposite sexual behaviors or sexual fantasies had occurred, homosexual if only same sexual behaviors or fantasies had occurred. On the attraction measure, heterosexuals were only attracted to the opposite sex, homosexuals attracted to only the same sex, and bisexuals attracted to both sexes, to at least some degree. On the identity measure, heterosexuals self-identified as “straight”, homosexuals identifying as “gay/lesbian”, and bisexuals identifying as “bisexual”. On the omnibus item, heterosexuals were those who were classified as heterosexuals across behaviors, fantasies, attractions, and self-identity. As asexuals and homosexuals were coded missing, those individuals remaining were classified as bisexuals on the omnibus item. (See table 2 for percentage of each definition of sexual orientation). All analyzes used a p-value of .01, using the Bonferroni correction.



2.  
*ntages of Participants Report Each Orientation by Item and Paricipant Sex\* (N =863)*

l Orientation	Heterosexual		Bisexual		Homosexual	
	Men	Women	Men	Women	Men	Women
aviors	88.50	84.60	7.20	14.50	4.30	0.90
sy	81.00	70.40	14.50	28.80	4.20	0.80
ty	93.50	97.50	3.00	2.00	3.40	0.50
tions	83.30	69.40	13.60	30.10	3.00	0.50
bus	75.50	54.50	22.70	45.50	1.70	0.00

264 men and *n* = 598 women

I broke the 16 independent variable measures into hypersexual (CSBI, SCS, SS-Preoccupation, WSFQ, ASBI-R) psychopathology (DASS, SS-Sexual Depression, SS-Depression) and social desirability (BIDR). Because BIDR-SD was not significant, it will not be used in analysis; BIDR-IM will be used as a covariate in analysis because it was significant. Analysis were ran separately for men and the two groups of women on hypersexuality and psychopathology.

**Effects of hypersexuality and sexual psychopathology for men**

I conducted separate multivariate analysis of covariance (MANCOVAs) to determine whether male heterosexuals’ and male bisexuals’ sexual behaviors, sexual fantasies, sexual attractions, sexual identities, and all of the preceding differed on measures assessing hypersexuality, using BIDR-IM (impression management) as a covariate. On all five the multivariate effect was not significant (see table 3 for a summary of multivariate effects). The covariate was statistically significant for all 5 MANCOVAs, F-values ranged from 2.91 to 3.65. Running another series of MANCOVAs with sexual orientation as the independent variables and

sexual psychopathology as the dependent variable, using BIDR-IM as the covariate, there was not a significant multivariate effect (see table 4). The covariate was not statistically significant for sexual behaviors ( $F = 2.66$ ) and all combined (2.86) but was statistically significant for sexual fantasy, self-identity and attraction  $F$ -values ranged from 3.59 to 3.75). I re-ran the MANCOVA as a MANOVA not controlling for the effects of BIDR-IM, and found no multivariate affects across the 10 measures.

Table 3.  
*Summary of multivariate effects of Sexual Orientation on Hypersexuality and Sexual Pathology*

Measure	Men	Women 1	Women 2
Hypersexual			
Identity	(160 vs. 6; 1.79) <sup>a</sup>	(196 vs. 4; 1.40) <sup>a</sup>	(201 vs. 4; 2.97) <sup>*a</sup>
Behaviors	(138 vs. 13; 0.73) <sup>a</sup>	(154 vs. 26; 1.82) <sup>a</sup>	(153 vs. 33; 1.67) <sup>a</sup>
Fantasy	(138 vs.27; 2.6) <sup>a</sup>	(141 vs. 58; 3.21) <sup>*a</sup>	(141 vs. 64; 3.82) <sup>*a</sup>
Attraction	(144 vs. 22; 1.23) <sup>a</sup>	(137 vs. 62; 3.41) <sup>*a</sup>	(144 vs. 63; 4.45) <sup>*a</sup>
Omnibus	(118 vs. 36; 1.52) <sup>a</sup>	(97 vs. 85; 3.29) <sup>*a</sup>	(96 vs. 92; 2.76) <sup>*a</sup>
Pathology			
Identity	(179 vs. 7; 0.45) <sup>a</sup>	(202 vs. 5; 0.48)	206 vs. 4; 0.24) <sup>a</sup>
Behaviors	(154 vs. 14; 0.21)	(159 vs. 30; 2.34) <sup>a</sup>	(158 vs. 31; 1.98)
Fantasy	(152 vs. 33; 2.06) <sup>a</sup>	(146 vs. 60; 1.67)	(146 vs. 63;1.33) <sup>a</sup>
Attraction	(159 vs. 27; 1.39) <sup>a</sup>	(139 vs. 66; 3.36)	(151 vs. 62; 0.76) <sup>a</sup>
Omnibus	(128 vs. 40; 0.95)	(102 vs. 89; 3.88) <sup>*a</sup>	(101 vs. 90; 0.89) <sup>a</sup>

Note: Numbers in parentheses represent number of participants classified as heterosexual vs. bisexual and  $F$  value from multivariate test; <sup>a</sup> the BIDR-IM covariate was statistically significant \* $p < .01$ .

**Effects of hypersexuality and sexual psychopathology for women**

I conducted MANCOVAs to determine whether female heterosexuals and female bisexuals differed on hypersexual measures, by using five different ways of viewing sexual orientation, using BIDR-IM as a covariate. Results revealed there were no significant

multivariate effects for sexual identifies for women group one but was significant for women group two (see table 3). The covariate was statistically significant for sexual behaviors for both groups of women ( $F = 4.65$  &  $5.04$ , respectively). Examination of table 4 shows, within group two of women, heterosexual women scored significantly lower on the WSFQ Exploratory and Sadomasochistic subscales (See table 4 for means and standard deviations).



Table 4

Differences between Heterosexual and Bisexual Women<sup>a</sup> by Sexual Orientation Measure on Hypersexual Measures

Measures	Identity		Fantasies		Attractions		Omnibus	
	Heterosexual	Bisexual	Heterosexual	Bisexual	Heterosexual	Bisexual	Heterosexual	Bisexual
CSBI	38.27 (10.36)	40.74 (7.81)	36.67 (8.08)	42.45 (13.54)*	36.80 (8.42)	42.16 (13.47)	36.73 (7.02)	41.72 (12.82)
SCS	11.88 (3.44)	13.75 (2.06)	11.40 (2.73)	13.17 (4.47)	11.54 (2.88)	12.89 (4.36)	11.29 (1.89)	12.91 (4.60)
SS Preoccupation	-0.45 (0.083)	0.40 (0.37)	-0.53 (0.78)	-0.17 (0.864)*	-0.56 (0.81)	-0.10 (0.81)*	-0.58 (0.76)	0.17 (0.87)*
WSFQ Exploratory	5.08 (5.13)	15.50 (12.26)*	4.14 (4.14)	8.16 (7.52)*	4.16 (4.18)	8.08 (7.02)*	3.65 (3.81)	7.53 (7.07)*
WSFQ Intimat	21.65 (11.30)	33.00 (10.39)	19.93 (11.32)	26.77 (10.23)*	19.90 (11.75)	27.00 (8.19)*	20.85 (11.48)	25.58 (10.08)*
WSFQ Impersonal	4.23 (6.29)	11.00 (6.98)	3.09 (4.31)	7.25 (6.57)*	2.96 (4.36)	7.67 (6.34)*	2.69 (3.83)	6.54 (6.35)*
WSFQ Sadoomasochistic	4.32 (6.29)	13.00 (12.83)*	3.23 (5.18)	7.66 (8.45)*	3.02 (4.92)	8.17 (8.53)*	2.77 (4.29)	7.16 (8.23)*
ASBI Coerce	11.19 (5.05)	10.50 (1.00)	10.78 (3.62)	12.06 (7.13)	10.63 (2.17)	12.41 (8.33)	10.54 (1.65)	12.07 (7.20)
ASBI Seduce	11.79 (6.04)	9.00 (1.82)	11.23 (5.22)	12.94 (7.30)	10.72 (4.90)	14.22 (7.38)	11.05 (5.03)	13.51 (6.79)

Note: <sup>a</sup> Means and Standard Deviations are for Women Group Two Only. \*p < .01. ASBI-R = Aggressive Sexual Behavior Inventory – Revised (Zurbriggen, 2000); CSBI = Compulsive Sexual Behavior Inventory (Coleman, Miner, Ohlerking, & Raymond, 2001); SCS = Sexual Compulsivity Scale (Kalichman & Rompa, 1995); SS = Sexuality Scale (Wiederman & Alleier, 1993); WSFQ = Wilson Sexual Fantasy Questionnaire (Wilson, 1981)

I conducted a MANOVA to determine whether female heterosexuals and female bisexuals' sexual behaviors differed on measures assessing hypersexuality, using BIDR-IM as a covariate. Results revealed there were no significant multivariate effects for sexual behaviors (see table 3). The covariate was statistically significant, women group one ( $F = 3.12$ ) and women group two ( $F = 3.86$ ).

I conducted a MANOVA to determine whether female heterosexuals and female bisexuals' sexual fantasies differed on measures assessing hypersexuality, using BIDR-IM as a covariate. Results revealed there were significant multivariate effects for sexual fantasies (See table 3); the covariate was statistically significant for both groups ( $F = 3.76$ ) and ( $F = 4.66$ ) respectively. Women group one heterosexuals scored significantly lower on the SS Sexual Preoccupation ( $M = -0.50$   $SD = 0.81$  vs.  $M = 0.03$   $SD = 0.77$ ), WSFQ Exploratory ( $M = 4.41$ ,  $SD = 5.81$  vs.  $M = 8.05$ ,  $SD = 6.36$ ), WSFQ Intimate ( $M = 20.77$ ,  $SD = 11.96$  vs.  $M = 26.59$ ,  $SD = 9.37$ ), and WSFQ Impersonal ( $M = 3.62$ ,  $SD = 4.80$  vs.  $M = 6.98$ ,  $SD = 5.27$ ) subscales. Examination of table 4 shows, within women group two, heterosexuals scored significantly lower on the CSBI Total Score, SCS Total Score, SS Sexual Preoccupation, WSFQ Exploratory, WSFQ Intimate, WSFQ Impersonal, and WSFQ Sadomasochistic scales (See table 4).

Results revealed there were significant multivariate effects for sexual attractions (see table 3); the covariate was statistically significant for women group one ( $F = 3.79$ ) and women group two ( $F = 3.57$ ). Women group one heterosexuals scored significantly lower on the WSFQ Exploratory ( $M = 4.27$ ,  $SD = 5.83$  vs.  $M = 7.95$ ,  $SD = 6.16$ ), WSFQ Impersonal ( $M = 3.45$ ,  $SD = 4.63$  vs.  $M = 6.89$ ,  $SD = 5.31$ ) subscales; women group two heterosexuals scored significantly lower on the SS Sexual Preoccupation, WSFQ Exploratory, WSFQ Intimate, and WSFQ Impersonal, and WSFQ Sadomasochistic scales (See table 4).

Results revealed there were significant multivariate effects for sexual fantasies (See table 3); the covariate was statistically significant for women group one ( $F = 2.89$ ) and women group two ( $F = 3.26$ ). Women group one heterosexuals scored significantly lower on the SS Sexual Preoccupation ( $M = -0.51$ ,  $SD = 0.83$  vs.  $M = -0.08$ ,  $SD = 0.81$ ), WSFQ Exploratory ( $M = 3.76$ ,  $SD = 4.85$  vs.  $M = 7.94$ ,  $SD = 7.09$ ), WSFQ Intimate ( $M = 20.96$ ,  $SD = 12.35$  vs.  $M = 26.40$ ,  $SD = 9.31$ ), WSFQ Impersonal ( $M = 3.22$ ,  $SD = 4.52$  vs.  $M = 6.58$ ,  $SD = 5.52$ ) WSFQ Sadomasochistic ( $M = 2.92$ ,  $SD = 5.88$  vs.  $M = 6.13$ ,  $SD = 7.22$ ) and ASBI Seduce ( $M = 10.67$ ,  $SD = 5.64$  vs.  $M = 13.98$ ,  $SD = 6.44$ ) scales. Women group two heterosexual scored significantly lower on the SS Sexual Preoccupation, WSFQ Exploratory, WSFQ Intimate, WSFQ Impersonal, and WSFQ Sadomasochistic scales (See table 4).

I conducted MANCOVAs to determine whether female heterosexuals and female bisexuals defined by five different, ways of viewing sexual orientation differed on psychopathology measures, using BIDR-IM as a covariate. The multivariate effect was only significant for sexual attractions and all preceding sexual orientations for women group one (see table 3 for a summary of multivariate effects). The covariate was statistically significant for sexual behaviors ( $F = 1.91$ ) and all preceding sexual orientations ( $F = 1.67$ ). The multivariate effect was not significant for women group two; however, the covariate was statistically significant only for sexual fantasies ( $F = 4.49$ ), sexual identity ( $F = 5.04$ ), and sexual attractions ( $F = 3.84$ ).

### **Effects of SABQ for men**

The SABQ was divided into hypersexual and psychopathology items, and I computed a new total variable from these groupings. I separated the hypersexual items and psychopathology items into four measures, two measures for hypersexual items and two total variables for



psychopathology items. The two hypersexual measures assessed hypersexuality as a source of unsafe sexual practices and sexual urges as a source of academic problems. The two psychopathology measures assessed psychopathologies as a source of academic problems and experiences with sexual, emotional, physical abuse and stalking. I assessed the degree to which men and women engaged in risky behaviors by conducting MANCOVAs with sexual orientation as the independent variable and BIDR-IM as covariate variable.

I conducted separate MANCOVA to determine if male heterosexuals and male bisexuals' sexual behaviors, sexual fantasies, sexual attractions, sexual identities, and differed on hypersexual measures assessing unsafe sexual practices. Results revealed no significant multivariate effect for sexual behaviors, sexual fantasies, sexual identity, sexual attractions and the omnibus item; F-values ranged from 0.01 to 5.12. The covariate was not statistically significant for any of the MANCOVAs F-values ranged from 0.07 to 0.741.

I conducted separate MANCOVAs to determine if male heterosexuals and male bisexuals' sexual behaviors, sexual fantasies, sexual attractions, sexual identities, and score on the omnibus item differed on hypersexual measures assessing sexual urges as a source of academic problems. Results revealed no significant multivariate effects for any of the MANCOVAs, F-values ranged from 0.19 to 4.25. The covariate was not significantly significant F-values ranged from 0.80 to 1.06.

I conducted separate MANCOVA to determine if male heterosexuals and male bisexuals' sexual behaviors, sexual fantasies, sexual attractions, sexual identities, and omnibus differed on psychopathology measures assessing experiences with regret and injury. Results revealed no significant multivariate effects, F-values ranged from 0.52 to 13.39. The covariate was statistically significant for all F-values ranged from 0.004 to 13.39.

I conducted separate MANCOVA to determine if male heterosexuals and male bisexuals' sexual behaviors, sexual fantasies, sexual attractions, sexual identities, and all preceding differed on psychopathology measures assessing psychopathologies as a source of academic problems and experiences with sexual, emotional, physical abuse, and stalking. Results revealed no significant multivariate effects F-values ranged from 0.36 to 14.06. The covariate was statistically significant for all F-values ranged from 0.14 to 18.70.

### **Effects of SABQ for women.**

I conducted a MANCOVA to determine whether female heterosexuals and female bisexuals differed on hypersexuality measures assessing unsafe sexual practices, using BIDR-IM as a covariate. Results revealed only a significant multivariate effect for sexual fantasies women group one ( $F = 12.68$ ), all non-significant F-values ranged from 4.46 to 22.98. The covariate was only significant for sexual identity ( $F = 8.80$ ) and sexual behaviors ( $F = 7.95$ ) in women group one and sexual behaviors ( $F = 7.70$ ) and sexual fantasies ( $F = 7.70$ ) for women group two, all non-significant F-values ranged from 6.18 to 10.55.

I conducted a MANCOVA to determine whether female heterosexuals and female bisexuals, in group one and two, differed on hypersexuality measures assessing sexual urges as a source of academic problems, using BIDR-IM as a covariate. Results revealed that for women there were no significant multivariate effects F-values ranged from 0.02 to 8.86. The covariate was only significant for women group two on sexual behaviors ( $F = 8.80$ ) and the omnibus item ( $F = 7.62$ ), all other F-values ranged from 0.19 to 6.72.

I conducted a MANCOVA to determine whether female heterosexuals and female bisexuals differed on psychopathology measures assessing experiences with regret and injuries, using BIDR-IM as a covariate. For women group one, results revealed there were no significant



multivariate effects for sexual behaviors, sexual fantasies, sexual identity, sexual attractions, and all preceding; F-values ranged from 0.14 to 5.34. The covariate was significant for sexual behaviors, sexual fantasies, sexual identity, sexual attractions, and all preceding; F-values ranged from 9.63 to 12.91. Results revealed significant multivariate effect for sexual behaviors in women group two ( $F = 21.33$ ), with bisexual women being more likely to engage in risky behaviors. Results revealed no significant multivariate effects for sexual fantasies, sexual identity, sexual attractions, and all preceding F-values ranged from 0.50 to 5.77. The covariate was not significant, F-values ranged from 5.77 to 7.99.

I conducted a MANCOVA to determine whether female heterosexuals and female bisexuals, in group one and two, differed on psychopathology measures assessing psychopathologies as a source of academic problems and experiences with sexual, emotional, physical abuse, and stalking, using BIDR-IM as a covariate. Results revealed there was a significant multivariate effects only for sexual attractions ( $F = 9.03$ ) women group one, with bisexuals experiencing more sexual, emotional, and physical abuse and be the victim of stalking. All other multivariate effects were not significant F-values ranged from 0.22 to 5.57. The covariate was only significant for women group one on sexual behaviors ( $F = 7.14$ ), sexual fantasies ( $F = 7.94$ ), and sexual identity ( $F = 8.59$ ), non-significant multivariate effect F-values ranged from 6.09 to 15.49.

### **Effects of intercourse on men and women**

I conducted a MANCOVA to determine whether male bisexuals and heterosexuals differed in the amount of sexual acts they engaged in, using BIDR-IM as a covariate. Results revealed no significant multivariate effect for men based on sexual behaviors, sexual fantasies, self-identity, attractions or the omnibus sexual orientation item, F-values ranged from 0.29 to



1.59. A MANCOVA revealed no significant multivariate effect for women in group one based on sexual behaviors, sexual fantasies, self-identity, attractions, or the omnibus sexual orientation time, F-values ranged from 0.29 to 4.61. A MANCOVA revealed significant multivariate effects for women in group two based only on sexual fantasies,  $F(1,243)=9.12$ ,  $p<.01$ , with bisexuals being more likely to have engaged in more vaginal and anal intercourse and to have given or received oral sex. No differences were found based on sexual behaviors, sexual identity, attractions, or the omnibus sexual orientation item, F-values ranged from 0.36 to 9.11.

### **Discussion**

The goal of the current study was to examine bisexuals and heterosexuals' degree of psychopathologies and whether the two differed on frequency of sexual activities. Based on past research, the hypothesis of the present study is that bisexuals and heterosexuals will differ on measures of hypersexuality or psychopathologies. The hypothesis of the study was not supported for male college students; however, the hypothesis was partially supported for female college students.

#### **Summary and Implications**

Past research on bisexuality has been problematic by different studies assessing sexual orientation by multiple definitions (Kinsey, 1948, Ulrich, 1994). As stated in the introduction, there is no clear research on bisexuals being hypersexual or experiencing more psychopathology. When examining bisexuality, the present study showed the importance of looking at sexual orientation in multiple ways and helped shed light on "myths" about bisexuals. As stated in the introduction, past research has stated the need for homosexuals and bisexuals not to be classified as one group (MacDonald, 1983). The present study has compared only heterosexuals to bisexuals, taking out homosexuals from analyzes. A comparison of bisexual males and bisexual

females was not conducted, as analysis revealed differences between men and women regardless of sexual orientation. There were differences between men and women on the SS Sexual Preoccupation, WSFQ Exploratory, and WSFQ Impersonal subscales. Therefore, if a comparison between male bisexuals and female bisexuals were conducted, I would not know the validity of the findings.

The current study set out to look at the similarities and differences between heterosexual and bisexual individuals on hypersexual and psychopathology measures. The present study defined sexual orientation in five different ways by behaviors, fantasies, self-identity, attractions, and an omnibus item. The results of this study indicate there are no differences between male heterosexuals and male bisexuals on hypersexual or psychopathology measures no matter how sexual orientation is defined. The reliabilities of the findings for men are supported because no matter how I defined sexual orientation no differences were ever found. However, for women depending on how sexual orientation is defined for hypersexual measures differences are found between heterosexual and bisexual women.

When defined by sexual behaviors women bisexuals and heterosexuals did not differ on hypersexual measures. Women do differ on hypersexual measures when sexual orientation is defined by fantasies. Women bisexuals consistently score higher on SS Preoccupation, WSFQ Exploratory, Impersonal, and Intimate subscales. Women group two bisexuals score higher on the CSBI, SCS, and WSFQ Sadomasochistic subscale. Self-identified bisexuals only differed from heterosexuals in women group two, scoring higher on WSFQ Exploratory and WSFQ Sadomasochistic subscales. When sexual orientation is defined by sexual attractions, bisexuals constantly score higher on WSFQ Exploratory and WSFQ Impersonal subscales. Women group two bisexuals score high on SS Preoccupation, WSFQ Impersonal, and WSFQ Sadomasochistic

subscales too. When assessed through the omnibus item, women bisexuals score higher on SS Preoccupation, WFSQ Exploratory, WSFQ Intimate, WSFQ Impersonal, and WSFQ Sadoomasochistic subscales. Women group one bisexuals score higher on ASBI Seduce.

One measure women in both groups consistently differed on was the WSFQ Exploratory subscale. One item this measure asks about is homosexuality. This may explain why bisexuals consistently scored higher on the Exploratory subscale, as bisexuals are more likely to have engaged in same-sex behaviors, fantasies and attractions. I defined bisexuals as individuals who were at least somewhat attracted to both sexes; therefore, bisexuals more bisexuals should have scored higher on fantasizing about homosexuality.

However, for psychopathologies women group one only differed being significantly more likely to be stressed, when sexual attractions and the omnibus item assessed sexual orientation. Jorm et al. (2002) found bisexuals to measure higher on anxiety, depression, and negative affects compared to homosexuals and heterosexuals, which supports women group one bisexuals scoring higher on stress. However, Jorm et al. (2002) concluded that bisexuals have the worst mental health. The present study does not fully support this statement, as bisexuals and heterosexuals did not differ across any measures of psychopathology, except stress for women group one. In addition, one may question the consistency of findings of women bisexuals scoring higher on the psychopathology measure of stress. My finding that women group one scored higher on stress was not found in women group two; in women group two, bisexuals and heterosexuals did not differ on any psychopathology measure, regardless of how sexual orientation was defined.

Overall, male and female bisexuals and heterosexuals were no more likely to have engaged in sexual activities; except for women group one who were bisexual based on sexual



fantasies were more likely to have engaged in more sexual activities (vaginal intercourse, anal intercourse, received oral sex, and gave oral sex). With female bisexuals, only based on fantasy, being the only participants who were more likely to have engaged in sexual activities, this may call into question past research stating bisexuals may be hypersexual (Miller et al., 2007).

The present study defined heterosexuals as never having engaged in any same sex behaviors, fantasies, attractions, or identifying as bisexual, asexual, or gay. Homosexuals were defined the same except they never engaged in opposite sex behaviors, fantasies, attractions and only identified as gay. Past research has defined heterosexuals as having engaged in mostly opposite-sex fantasies and behaviors, while allowing a few same-sex fantasies too. The present study may have factored out differences past research has found by how heterosexuals and bisexuals were defined. In addition, past research has placed bisexuals and homosexuals together, comparing them to heterosexuals. This may also explain the present study's findings.

The effects of sample size may explain the present studies finding. If I define sexual orientation for women by self-identity, 2.0% are bisexual; however, if I define sexual orientation for women by attractions, 30.10% are bisexual. The same happens with men, 3.0% identify as bisexual; however, 14.50% have bisexual fantasies. The effects of sample size may explain why I did not find consistent differences between the two groups of women. This may explain why women bisexuals and heterosexuals differed on measures, and I did not find differences between men bisexuals and heterosexuals. The lack of differences in men could be due to the effects of sample size, effecting power to define differences. Past research, states there are differences; however, the present study factored out social desirability.

Before conducting analysis, I examined differences among my sample. I conducted a MANOVA with sample (men, women group one, and women group two) as my independent

variables, and I used all of the measures as dependent variables. I found the BIDR-IM subscale to be significant across men and women. Impression Management measures the degree to which participants are presenting themselves in a socially desirable way. As the nature of this study is about sexuality and the BIDR-IM is significant, this suggests that Impression Management should be controlled for when analyzing the data. Because of this, I used Impression Management as a covariate on all analysis. Social Desirability was not significant; therefore, it will not be used as a covariate.

The covariate of impression management was statistically significant in a majority of the MANCOVAs. This may explain the present study's findings; I factored out socially desirable responses, which to my knowledge has not been controlled for in past research. With the covariant being statistically significant in a majority of the MANCOVAs, readers may question past research findings, which have not controlled for social desirability. Past research may not have been measuring the true tendencies of heterosexual and bisexual individuals, but what these individuals feel is a socially desirable response.

The implication of the present study's research findings may involve helping change the ways cultures view and stereotype bisexual individuals. As stated in the introduction, both heterosexuals and homosexuals often stigmatize bisexuals, as a result, bisexuals are rejected by both heterosexuals and homosexuals. The present study shows that there is not much truth to myths with in our society, which polarize sexual orientations. The present study shows the importance of not polarizing sexual orientation to heterosexuality and homosexuality.

### Limitations

The current study has limitations, which may restrict the generalizability of results. First, the sample size of bisexuals in the self-identity category was limited to 14 bisexuals. The

consistency of findings may also be questioned, as group one of women and group two of women were not consistent. Participants answered based on retrospective self-report, bringing up the issue of survey-honesty. The survey did not ask about the sexual behaviors, fantasies, self-identity, and attractions more than once. The homogenous sample made of predominantly Caucasian, Christian, self-identified heterosexual females, may limit the generalizability of results. The study is limited to individuals who are single and excluded homosexual individuals in data analyzes.

#### Future Research

A larger sample of bisexuals should be collected for future research, and future research should also focus on collecting a larger sample of male participants. The current study shows a need to control for social desirability. Future research should focus on finding find a more representative sample to allow for generalizability of results. Surveys should be consistent in constantly measuring the same timeframe of behaviors. Research should focus on finding replication of the same results for women. Researchers may want to examine how heterosexual, bisexuals, and homosexual individuals compare to one another across psychopathology and hypersexual measures.



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## Appendix

## Sexual and Academic Behavior Questionnaire (SABQ)

The following questions relate to some sensitive experiences you may have had with other people, including physical and sexual experiences. Please leave items that you do not feel comfortable answering blank.

**Within the last 12 months (Y = "Yes"; N = "No"):**

1. Y or N Were you in a physical fight?
2. Y or N Were you physically assaulted (do not include sexual assault)?
3. Y or N Were you verbally threatened?
4. Y or N Were you sexually touched without your consent?
5. Y or N Was sexual penetration attempted (vaginal, anal, oral) without your consent?
6. Y or N Were you sexually penetrated (vaginal, anal, oral) without your consent?
7. Y or N Were you a victim of stalking (e.g., waiting for you outside your classroom, residence, or office; repeated emails/phone calls)?

**Within the last 12 months, have you been in an intimate (coupled/partnered) relationship that was (Y = "Yes"; N = "No"):**

8. Y or N Emotionally abusive? (e.g., called derogatory names, yelled at, ridiculed)
9. Y or N Physically abusive? (e.g., kicked, slapped, punched)
10. Y or N Sexually abusive? (e.g., forced to have sex when you didn't want it, forced to perform or have an unwanted sexual act performed on you)
11. **Did you or your partner use a method of birth control to prevent pregnancy the last time you had vaginal intercourse?**
  - A. Yes
  - B. N/A, have not had vaginal intercourse
  - C. No, have not had vaginal intercourse that could result in a pregnancy
  - D. No, did not want to prevent pregnancy
  - E. No, did not use any birth control method
  - F. Don't know

**12. Within the last 12 months, have you or your partner(s) used emergency contraception ("morning after pill")?**

- A. N/A, have not had vaginal intercourse in the last 12 months
- B. No
- C. Yes
- D. Don't know



**13. Within the last 12 months, have you or your partner(s) become pregnant?**

- A. N/A, have not had vaginal intercourse in the last 12 months
- B. No
- C. Yes, unintentionally
- D. Yes, intentionally
- E. Don't know

**Within the last 12 months, have you experienced any of the following (Y = "Yes"; N = "No"):**

- 14. *Y or N Diagnosed with a sexually transmitted disease or infection*
- 15. Y or N Did something you later regretted
- 16. Y or N Forgot where you were or what you did
- 17. Y or N Got in trouble with the police
- 18. *Y or N Had consensual sex with someone you met online*
- 19. *Y or N Had consensual sex with someone you met at a party or bar*
- 20. *Y or N Had consensual sex with two or more other people at the same time*
- 21. *Y or N Had sex with someone who you believe is a high risk for having or getting a sexually transmitted disease or infection*
- 22. Y or N Had sex with someone without giving your consent
- 23. Y or N Had sex with someone without getting their consent
- 24. Y or N Had unprotected sex
- 25. Y or N Physically injured yourself
- 26. Y or N Physically injured another person
- 27. Y or N Seriously considered suicide
- 28. *Y or N Treated for a sexually transmitted disease or infection*

**Within the last 12 months, have any of the following affected your academic performance?  
Use the following response options**

- 29. **Y or N** Alcohol use
- 30. **Y or N** Allergies
- 31. **Y or N** Anxiety
- 32. **Y or N** Assault (physical)
- 33. **Y or N** Assault (sexual)
- 34. **Y or N** Attention Deficit and Hyperactivity Disorder (ADHD)
- 35. **Y or N** Body Image Concerns
- 36. **Y or N** Cold/Flu/Sore throat
- 37. **Y or N** Concern for a troubled friend or family member

- 38. **Y or N** Chronic health problem or serious illness (e.g., diabetes, asthma, cancer)
- 39. **Y or N** Chronic pain
- 40. **Y or N** Death of a friend or family member
- 41. **Y or N** Depression
- 42. **Y or N** Discrimination (e.g., homophobia, racism, sexism)
- 43. **Y or N** Drug use
- 44. **Y or N** Eating disorder/problem
- 45. **Y or N** Finances
- 46. **Y or N** Gambling
- 47. **Y or N** *Gender identity issues*
- 48. **Y or N** Homesickness
- 49. **Y or N** Having had sex without getting their consent
- 50. **Y or N** Injury (fracture, sprain, strain, cut)
- 51. **Y or N** *Internet use for gaming (e.g., World of Warcraft; Second Life)*
- 52. **Y or N** *Internet use for sex (e.g., "porn" sites; sex-oriented chat rooms)*
- 53. **Y or N** *Internet use for social networking (e.g., MySpace, facebook)*
- 54. **Y or N** Learning disability
- 55. **Y or N** Participation in extracurricular activities (e.g., campus clubs, organizations, athletics)
- 56. **Y or N** Pregnancy (yours or your partner's)
- 57. **Y or N** Relationship difficulties
- 58. **Y or N** Roommate difficulties
- 59. **Y or N** *Self-esteem issues*
- 60. **Y or N** *Sexual orientation issues*
- 61. **Y or N** Sexually transmitted disease/infection (STD/I)
- 62. **Y or N** Sinus infection/Ear infection/Bronchitis/Strep throat
- 63. **Y or N** Sleep difficulties
- 64. **Y or N** Stress
- 65. **Y or N** Work